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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,344	11/21/2006	Torsten Pechstein	PECH3002/FJD	7754
23364 7590 06/08/2009 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
BELL, BRUCE F				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
06/08/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/530,344

**Applicant(s)**

PECHSTEIN ET AL.

**Examiner**

Bruce F. Bell

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date 4/6/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 21, 28-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 21, 28-30 are vague and indefinite with respect to what the structure of the interface is from the instant claims as set forth. The claims are vague with respect to how these interfaces are constructed in order for them to be non-galvanic, galvanic or induced interfaces and further how the data memory stores is constructed in order to store historical data versus the data already set forth in the claim on which this rejected case depends. The applicants instant specification further does not disclose the structure of such interface or the structure of such data memory stores.

Correction and/or clarification are requested.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 18-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Zetter (4157283).

Zetter disclose an apparatus for making electrochemical measurements having a sensor and housing unit 12, a transmitter 14 and a controller unit 16. The transmitter unit and control unit are connected by means of a four conductor cable 18. The sensor and housing unit comprise a housing 20 for a pH electrode 22, a reference electrode 24, an ion selective electrode 26 and a combination temperature sensor/ground pin element 28. The active sensing portions of the electrodes, sensor and ground pin are disposed in a zone of the housing 20 which leaves the sensors open to the environment, but protects them from mechanical damage housing the electrical terminal connection ends of these elements project through seals into a hermetically sealed zone 30 of housing 20. A sealed conduit 32a is used to see between the sensor and transmitter assemblies to shield the electrical cable connections between the transmitter and the electrodes, ground pin and temperature sensor. See col. 3, line 66 - col. 4, line 33. The electrodes develop electrochemical potential voltages and the temperature sensor develops voltage potential information through an appropriate resistance mechanism. The transmitter unit converts the voltage potential information of the electrodes and the temperature sensor to variable current signals and transmits these signals by means of the cable to the controller for appropriate processing and display. The varying voltage information is converted to correspondingly varying current information so that it may be transmitted over the cable. The transmitter comprises a plurality of high impedance, constant current, voltage to current conversion circuits and the power to drive the

voltage to current conversion circuitry of the transmitter is obtained from the control unit. See col. 4, lines 34-50. A compensated pH signal is directed to a conventional binary coded decimal analog to digital converter element for direct digital conversion of the signal. The digital pH output signal is directed to the pH display and to a pH comparator which compares the digital pH value with the digital alarm set switch for activation of a pH alarm relay. See col. 6, line 63 - col. 7, line 2. An arithmetic circuit element utilizes digital temperature compensation and requires digital temperature information. An analog temperature signal is directed to an A/D converter which for purposes of efficiency is the same converter used for the HP data signal. See col. 7, lines 46-51. The transmitter circuitry comprises a voltage supply and system common circuit, temperature voltage to current converter circuit, rf filter circuits, pH electrode voltage to current converter circuit, pS electrode voltage to current converter circuit, input rf filter circuit and reference electrode circuit and constant bias current circuit. The transmitter circuitry provides for a low impedance current path to the grounded solution via the ground pin section of the temperature sensor element of the housing. See col. 8, lines 10-21.

Zetter anticipates the applicants instant invention as shown by way of the disclosure above with respect to the instant claims as presented. Zetter shows a sensor and housing that is connected with a transmitter unit that is sealed together and shows that the data signals are transmitted from the transmitter unit to the control unit by way of a cable. The digital data memory is included in the sensor and transmitter units that are sealed together. An analog/digital converter is shown to be used to convert the

analog signal to a digital signal to produce a pH value in digital form. Predetermined values are set so that alarms can be set to ensure that the device is being used correctly. The microprocessor is utilized for the purpose of controlling and receiving the memory data from the sensor and transmitter assemblies and is connected by an interface between the transmitter and microprocessor (i.e. cable). Cables of this type are well known for removable connection with the device to which they are being connected. Such as an RS-232 cable interface.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 18-31, 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Meinema (4858615).

Meinema disclose a sensor and memory unit (30, 92 or 94) that includes a sensor assembly 34 having at least one sensor (48, 50 or 96) therein and a memory (18, 22, 70 or 98) associated and fixed there with. The memory is mounted in a memory module (38 or 90) which is connected by a multiconductor lead (40 or 88) to the sensor or sensor. The sensor assembly can be fixed in the distal end of a catheter 32. The sensor and memory unit 94 can be coupled to a signal processing and conditioning circuitry (76, 176 or 276) which can include a microprocessor 178 for processing the sensor signals and conditioning/correcting based upon the information data retrieved

from the memory 98. See abstract. A catheter sensor and memory unit 30 includes a catheter 32, a sensor assembly 34 at one end 36 of the catheter and a memory module 38 coupled by a multi-conductor lead 40 through a three way connector 42 to the other end 44 of the catheter. A coupling 46 is provided at the end 44 of the catheter for coupling to a fluid delivery or withdrawal system not shown. The sensor assembly 34 includes a tube 47 having two sensors 48 and 50 therein. The sensor 48 is a temperature sensor bulb and the sensor 50 can be a pressure sensor or an electrode of in vivo measurement of body fluids. The temperature sensor bulb is surrounded by thermal conducting material 52 packed in the end of the tube 47 which is sealed off by an end plug 54. . The tube 47 has a hole 56 therein for sensing pressure or for measuring body fluids. Inside the tube 47 is a carrier 58 mounting the sensor or electrode 50 beneath the hole 56. A sealing material 60 is provided in the tube 47 around the sensor or electrode and the hole 56. See col. 6, lines 44-66. The multi-lead conductor extends to and into a housing 68 of the memory module 38. A memory 70 such as a PROM is mounted within the housing 68 on a circuit board. Wire conductors 61 and 62 within the multi-conductor lead 40 connect the sensors to the connector pins 72 situated within a connector housing 74 fixed to the housing 68. The PROM 70 is connected to the connector pins 72 also. See col. 7, lines 20-33. The sensing chamber 86 has at least one sensor therein which is coupled by a lead 88 to a memory module 90 similar to or identical to the memory module 38 to form the sensor and memory unit 92. See col. 7, lines 42-44. The sensor and memory unit 94 includes a sensor 96 and a memory 98. The circuit 76 is adapted to be coupled by means of connector pins 101-

105 to the sensor and memory unit 94. The circuit 76 is adapted to measure and detect the characteristic data in the memory associated with the sensor 96 and is converted in the signal processing and conditioning circuit 76 into voltages, currents or gain factors and these voltages, currents or gain factors are utilized in adjusting circuit components in the signal processing and conditioning circuit 76. See col. 7, lines 55-67. A voltage bus 106 is connected to connector pin 101 for supplying voltage to the sensor 96. The voltage can also be supplied to the memory 98. The sensor 96 can be a temperature sensor signal to a connector pin 102 and a pressure sensor signal to pin 103 which pins 102 and 103 are connected to a first amplifier 108 and a second amplifier 110. The output of the amplifier 108 which receives the temperature sensor signal is combined with the pressure sensor signal supplied to the second amplifier 110 for controlling the adjustment of the second amplifier 110. See col. 8, lines 10-17. The adjustments of the amplifiers are controlled by the data read from the memory and supplied to connector pin 104. This adjustment is effected by a clock 112. The clock is coupled via a bus 114 to the terminal pin 105 for supplying a clock pulse to the memory connected to the connector pins 104 and 105. The clock supplies a clock pulse to the bus which then supplies the clock pulse to the memory and to clock inputs of latching circuits. See col. 8, lines 24-41. The circuit 176 includes a microprocessor 178 which is coupled by an address bus 180 and data bus 181 to a buffer circuit 182 that is connected to connector pins 104 and 105 for retrieving information data from the memory. The microprocessor 178 processes the data retrieved from the memory and then causes an appropriate adjustment of the second amplifier. The microprocessor supplies address signal to the



address bus which controls latch circuits 184 and 186. Latch circuit 184 supplies a digital signal to a analog digital converter 185 which outputs an analog signal that is input to a second amplifier as an offset signal. The late supplies a gain adjust or gain factor signal directly to the second amplifier. The output signal from the amplifiers are digitized by an A/D converter 190 that has an output coupled to another latch circuit. See col. 8, line 53 – col. 9, line 4.

The prior art of Meinema anticipates the applicants instant claims as presented as shown by way of the disclosure to Meinema above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB  
June 5, 2009

/Bruce F. Bell/  
Primary Examiner, Art Unit 1795